Figure 1: header image, text reads “acmc21: connections”

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Mutatis Mutandis: Using Computational Thinking to Interpret Scores by Herbert Brün

James Aylward

Abstract

This discussion examines the work Mutatis Mutandis (1968/1995) by early computer music pioneer, Herbert Brün (1918-2000). Brün started his work with computer music in the late 1950s in Paris, then the WDR studio in Cologne and the Siemens studio in Munich. In 1962 he was invited by Lejaren Hiller to join the faculty at the University of Illinois where he remained for the rest of his working life.

Next to music, Brün was also a computer graphic artist, a cybernetician, and actively interested in the political and social aspects of music and composition. It is these elements that influence his work Mutatis Mutandis. In this piece, Brün presents a number of computer generated graphics, but instead of treating these graphics like a score, performer is given instructions to "construct, by thought and imagination, the interpreter's version of a structure that might leave the traces which the graphic displays." In this sense, he sought a means of stimulating the idea of structured process for the "composing interpreter" rather than simply an activity in attempted reconstruction. This meta approach can challenge how we view the capability of computers to generate music and what graphic scores can communicate to the performer.

The author will document and reflect upon the process of preparation of this work for performance. In seeking to develop a version which best combines his creative talents within the bounds of the score, the author will try to develop a deeper understanding and what it means to creatively apply principles of

"algorithmic thought" and "cybernetics" to an acoustic performance. He will also present a recording of a performance of this piece that will demonstrate how computers can indirectly be used to inspire creativity.

Author Biographies

Text goes here.

Musica ex machina: integrating the sonic pallet of machines with acoustic instruments.

Lindsay Vickery

Abstract

Californian composer Robert Erickson was one of the first to directly search for the "music in non-musical sounds" as the inspiration of music with acoustic instruments and electronics. He pioneered the use of analog spectrography to visualise the shapes of complex sound objects. This paper examines the evolution of the practice integrating of pre-recorded mechanical sounds and acoustic instruments. The foundations of the practice of exploring mechanical sound sound as a subject for 'musical' investigation is discussed in relation to Modernist developments including Futurism and Musique Concrète. The discussion will focus on w orks from the last 50 years by Robert Erickson (1917-97), Barry Traux (1947-) Peter Ablinger (1959-), Annie Gosfield (1960-) , James Saunders (1972-) , Joanna Bailie (1973-) and the author. Techniques employed by composers for combining mechanical sounds and acoustic instruments including spectral analysis, sonification, transcription, resynthesis and transformation will be considered. Issues regarding coordination and sound projection of live and pre-recorded elements will also be addressed.

Author Biographies

Composer/performer Vickery's music includes works for acoustic and electronic instruments in interactive- electronic, improvised or fully notated settings, ranging from solo pieces to opera and has been commissioned by numerous groups for concert, dance and theatre. He is a founder member of ensembles GreyWing (2016-), Decibel (2009-), HEDKIKR (2001-) and Magnetic Pig (1993- 2003). He writes and presents on a range of topics, most recently on the emergence of the "screenscore", nonlinear music and the realisation of Cage's music, in publications/conferences. He is coordinator of Composition and Music Technology at the WA Academy of Performing Arts at Edith Cowan University.